African plants

Under the title *Die Blütenpflanzen Afrikas*,[5] Dr. FRANZ THONNER, after listing the chief botanical works and directing attention to some of the more scattered literature pertaining to the flora of Africa and supplying a detailed table of contents, gives a convenient key to the determination of the families of African flowering plants; then he presents the main body of the work, namely a key for the determination of the genera, which occupies about 540 pages. The text is supplemented by 150 plates, and a map indicating the floral regions and provinces of the continent.

Each family is described as to the essential and most striking characters and is represented, moreover, by a full page illustration of a characteristic genus; the number of genera and species of each family, so far as it occurs in Africa, is mentioned. Furthermore, the number of species in each genus and their geographical distribution is indicated.

The author presents no bibliography in connection with the text, and there is comparatively little in the way of synonomy; it is, however, definitely stated in the introduction that the limitations of families and genera are in accordance with ENGLER and PRANTL'S *Die natürlichen Pflanzenfamilien* and DALLA TORRE and HARMS'S *Genera Siphonogamarum*, so that for critical identification it will be necessary to use the book largely in connection with these and other important works of reference.

The keys are ingeniously arranged, well contrasted, and lucid; the illustrations are clear and advantageously portray the general and detailed characters of the plant, and well represent the different families. The volume also contains a carefully prepared comparative table giving the number of families, genera, and species as well as their general geographical distribution; it also contains a glossary, a list of botanical authors, and a useful catalogue of the common African plant-names associated with the proper scientific name.

On the whole the work brings together in an epitomized form and in a single volume much information concerning the flora of Africa that hitherto has been scattered through many different volumes; hence it is a work which will be of great practical use both in the herbarium and in the field.—J. M. GREENMAN.

MINOR NOTICES

Das Pflanzenreich.[6]—Part 36 consists of a monographic treatment of the Nepenthaceae by the well-known writer and authority on insectivorous plants, Professor J. M. MACFARLANE. An excellent general account of the family, following the usual sequence of this series, precedes the taxonomic consideration

[5] THONNER, FRANZ, Die Blütenpflanzen Afrikas: eine Anleitung zum Bestimmen der Gattungen der afrikanischen Siphonogamen. pp. xvi+673. *pls.* 150. *1 map.* *M* 10 (12). Berlin: Friedländer & Sohn. 1908.

[6] ENGLER, A., Das Pflanzenreich. Heft 36 (iv. 111). Nepenthaceae von J. M. MACFARLANE. pp. 92. *figs.* 19 (95). Leipzig: Wilhelm Engelmann. 1908. *M* 4.60.

of the group. A concise dichotomous key leads one direct to the species under which are numerous references to literature, synonomy, a detailed description, concise statement of geographical range, and a rather full citation of exsiccatae. The author recognizes 58 species and several varieties for the one genus Nepenthes, of which 8 species and 4 varieties are here published for the first time. The main body of the work is followed by an alphabetical list of artificial hybrids. These are designated by the binomial under which is given, so far as known, the names of parent species. The family is illustrated by 19 figures; a complete index concludes the part. The production is quite in accord with previous publications of this comprehensive and admirable series, and it is pleasing to note the tendency toward international cooperation which is already manifest in the *Pflanzenreich*.

Part 37, treating the Araceae[7] (begun in part 21 of this series), comprises: (1) a supplement to the Pothoideae in which a new genus (*Epipremnopsis*) is proposed with a single species, (2) an exhaustive treatise of the Monsteroideae, which reach their highest development in equatorial Asia and America, and in which group the authors recognize 12 genera and 190 species, 30 being new to science, and (3) an elaboration of the Calloideae with 4 monotypic genera. A concise key to the species precedes the larger genera, the species are clearly defined, and the numerous clean-cut illustrations happily combine general with essential detail characters.—J. M. GREENMAN.

Flora montana Formosae.[8]—This work concerns the mountain flora of the Island of Formosa, embracing the region lying at an elevation of 3000 to 13,000 feet. The total number of species recorded for this region is 392; the sebelong to 79 families and 266 genera. The author enumerates the various composing floral elements, such as the arctic, antarctic, alpine, tropical and North American, Malayan, Himalayan, southern, central, and northern Chinese, Japanese, and endemic. These upon summation show that "the flora is, in general, temperate, having as many as 320 species of temperate character, or 81 per cent. of the whole number of elements." The flora of the island has its strongest affinity with central and southern China and Japan, particularly as to the ratio of components, but as to their character "the flora of Formosa has as triking affinity to that of Japan." After a discussion of the general aspect of the vegetation and a division of the montane zone into four briefly characterized regions, the author follows with a detailed enumeration of the plants. In this list 69 species and 9 varieties are published as new to science. The descriptive matter is supple-

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[7] ENGLER, A., Das Pflanzenreich. Heft 37 (iv. 23 B). Additamentum ad Araceas-Pothoideas von A. ENGLER, Araceae-Monsteroideae von A. ENGLER UND K. KRAUSE, Araceae-Colloideae von K. KRAUSE. pp. 1–160. *figs 60 (498)*. *M* 8.40. Leipzig: Wilhelm Englemann. 1908.

[8] HAYATA, B., Flora montana Formosae. Jour. Sci. Coll. Tokyo **25**:1–260. *pls. 1–41*. 1908.